GRUMMAN

planenews

A biweekly publication for Grumman Aerospace employees

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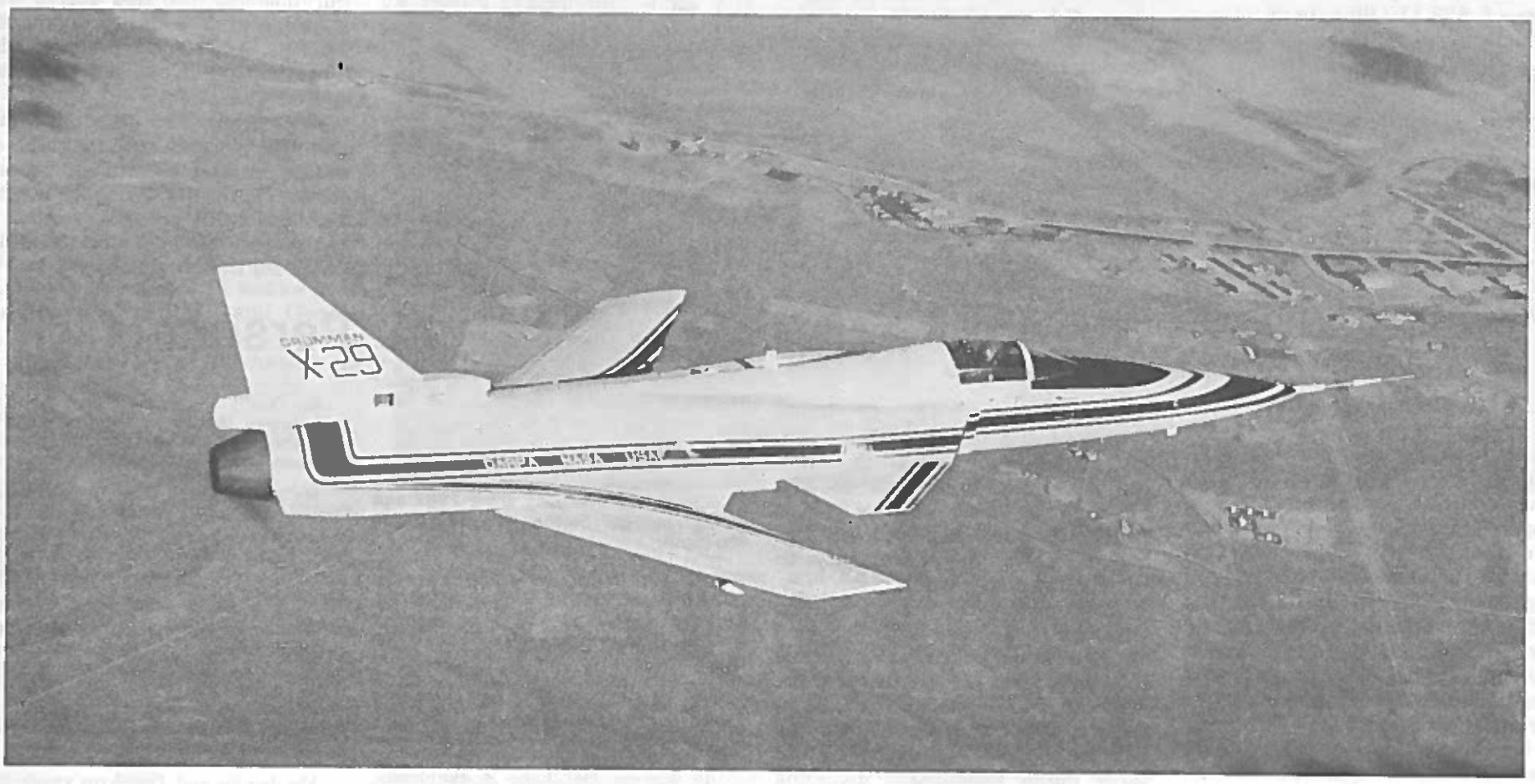

Encore! *The X-29 successfully completed its second flight at Edwards Air Force Base in California, on Monday, February 4. It stayed aloft for one hour, 10 minutes and reached a top speed of 285 knots (328 mph). For more details, turn to page 4.*

What's inside

How did the company do in 1984? Why is Grumman requesting a court order to delay sale of New York City's Flxible buses? Find out by reading News Briefs on page 2.

The Grumman EF-111A program is not dead — in fact, it's quite healthy. See page 3 for more information.

The PDOC team has been busy getting the third STA ready for NASA. First flight is slated for early March. Read page 5.

Thinking about quitting? Try the company-sponsored FreshStart program. See page 6.

The quality circle is alive and kicking at Grumman. Is it just a fad or is it here to stay? Find out on page 7.

Gen. Lawrence Skantze, commander of Air Force Systems Command, talks about Joint-STARS, space-based radar, ATF, and other topics of interest to Grummanites. Turn to page 8 for highlights of his recent speech made to the Air Force Association Hap Arnold chapter on Long Island.

Grumman Manufacturing/Technology scholarship winners are getting a two-sided education — in the classroom and in the workplace. Applications are now being accepted. Details can be found on page 13.

news briefs

Yearly earnings

Grumman Corporation has reported 1984 sales of $2,603,639,000 and net income of $108,418,000, or $3.62 per share. These figures compare to 1983 sales of $2,254,778,000 and net income of $110,746,000, or $3.82 per share.

For fourth quarter '84, sales of $744,678,000 produced net earnings of $28,110,000, or $.94 per share. In 1983, fourth quarter sales totaled $618,792,000 and net income was $32,788,000, or $1.11 per share.

The 14 percent decline in fourth quarter '84 earnings was due primarily to a write-down of inventory and tooling for the discontinued Kubvan truck program, which reduced net income by $4.4 million. Increased research and development expenditures, and costs associated with phasing out solar energy business also depressed quarter profits.

Aerospace sales in 1984 increased approximately $305 million, or 15 percent. The increase was due to the delivery of one additional EA-6B aircraft, delivery of four E-2Cs to Japan, a higher support effort on the E-2C program, and the delivery of an increased number of modification kits and equipment installations for the EF-111A program. Offsetting the profits from these increased sales were substantial R&D expenditures on the X-29, the A-6, and advanced electronic programs.

Grumman Data Systems sales also showed a 26 percent increase. However, R&D investments for future business opportunities also held down profits.

In the commercial non-aerospace segment, sales were 23 percent higher in 1984 due to increased sales of aluminum truck bodies. But profits were reduced by write-offs on the discontinued Kubvan program.

Commenting on the '84 results, Grumman Chairman Jack Bierwirth said, "In 1984, we strengthened the foundation for our future growth. We received a Navy contract for more than $1 billion to upgrade the F-14 and A-6 aircraft, which will extend the production life of these two major programs through the end of the century.

"The first flight of the X-29 forward swept wing aircraft was an outstanding success, attesting to our ability to apply the advanced technologies required for future aircraft," he continued. "And the company's investment in research and development was substantially increased to further enhance our present talents, especially in the world of electronics. Viewed in the context of their long-term benefits to Grumman, these developments provide a solid outlook."

Stuart appointments

At Stuart Operations, three Grummanites received new assignments.

Bill Mang has been appointed Chief of Production Operations for Plant 77. In this capacity, Mang is responsible for all production activities at the facility. He reports directly to Bob Watkins, Vice President and General Manager of Stuart Operations.

Bob Saelzer has been named Production Operations Manager-Military at Stuart. He has also been appointed deputy to Mang.

Joe Morgan has been appointed Production Operations Manager-Commercial. Morgan reports to Mang.

Flxible update

On February 13, Grumman Corporation and two affiliates requested a court order to delay the disposal of 845 Flxible Model 870 buses by the New York City Transit Authority until the company has had a reasonable opportunity to thoroughly inspect them.

In a motion filed this morning, Grumman asked the State Supreme Court of New York County to take the action in order to preserve evidence that is central to a $324 million lawsuit filed against the company by New York City and three public authorities, including the NYCTA.

Grumman maintains that the NYCTA action of selling the buses as scrap after allowing them to deteriorate for a year in an open lot without adequate protection will destroy evidence of the quality of the buses in dispute and poor maintenance by NYCTA. Grumman has consistently maintained that inspection would reveal that there is no reason to remove the buses from service in the first place.

The company's contention is supported by the fact that 163 Model 870 buses manufactured at the same time and as part of the same order are still being operated by private companies on New York City streets today. Furthermore, some 4,000 are operating safely and reliably in 63 other cities from coast to coast.

The city and the public authorities filed suit against Grumman in May 1984 alleging that the company knew that the buses contained structural flaws when the buses were sold to the city in 1979. Grumman maintains that it was unaware of any problems with the buses until long after they were delivered and being operated by NYCTA.

Grumman filed counterclaims for over $1 billion against the NYCTA and the City of New York in December 1984, including claims for breach of NYCTA's obligations under its contracts and under settlement agreements executed in 1981, and seeks recovery of more than $65 million dollars expended by Grumman in repairing the Model 870 buses at NYCTA's request.

obituaries

LISA PETRUCHIK of General Cleaning, Plant 30, died January 18 at the age of 24. She had been with the company since 1984 and resided at 200 N. Linden St., No. Massapequa, N.Y.

ROBERT A. NOWAK of Maintenance, Plant 12, died January 18 at the age of 56. He had been with the company since 1963 and resided at 1098 Namdac Ave., Bay Shore, N.Y.

EMORY BELL of Maintenance, Plant 56, died January 22 at the age of 63. He had been with the company since 1967 and resided at 6407 Sefton Ave., Baltimore, Maryland.

NORMAN H. NIEDERMAN of Computer Design, Plant 35, died January 19 at the age of 48. He had been with the company since 1961 and resided at 39 Roxbury Dr. Commack, N.Y.

LEON M. DAVIDSON of Computer Technology Development, Plant 35, died January 25 at the age of 51. He had been with the company since 1964 and resided at 15 Kayron Dr., Lake Ronkonkoma. N.Y.

Win NASA pact

Grumman has won a contract worth $42 million from the National Aeronautics and Space Administration (NASA) for a major computerized engineering system.

This Engineering Analysis and Data System (EADS) will be integrated, installed, and maintained by Grumman Data Systems at NASA's Marshall Space Flight Center in Huntsville, Alabama.

EADS is a large-scale system based on a high-speed computer and several mainframe computers. NASA will use it to perform complex engine analyses of space-vehicle powerplants, such as the Space Shuttle main engines. NASA will also utilize EADS's data processing and advanced graphics capabilities for meteorological, engine design, and structural design modelling.

Grumman is teamed with Huntsville-based New Technology, Inc., which will provide communications and network expertise.

"For tomorrow's spacecraft, engineers will need the incredible power of supercomputers — and Grumman has the knowlege and experience dating back to the Apollo program to integrate large-scale systems," says Grumman Chairman Jack Bierwirth. "We've designed supercomputer systems for our own operations and this is a major step in using that expertise to expand our business into new space, engineering, and scientific computer systems. And we are proud to play a premier role in our nation's future space exploration."

Grumman will begin work on the five-year program in Bethpage next month, eventually shifting personnel to its Huntsville office to manage the installation and maintenance of the system. No new hires are anticipated for the program.

Personals

My family and I would like to express our sincere thanks and appreciation for your thoughtfulness and sympathy during the recent loss of my father. **John Gazzola**

My family and I wish to express our sincere thanks to ESO, Manufacturing Scheduling and my co-workers for their kind expressions of sympathy during the recent loss of my sister Margaret. **Thomas McKeegan**

My family and I wish to express our sincere thanks to all my friends in the R&D Center, CDC, ESO for their lovely floral spray, and to my co-workers in Grumman for their kind expressions of sympathy during the recent loss of my father. **Judy Simins Gran**

My family and I wish to thank ESO and all my co-workers for their concern and sympathy during the recent loss of my husband Arthur. **Marilyn Pomponio**

My family and I wish to express our sincere thanks to all those Grummanites who have offered such genuine sympathy and support in the recent loss of my wife. It has helped us all through a difficult period. **R. B. Conklin**

My sister and I want to thank the Grumman ESO for their kind expression of condolences during the recent loss of my brother William. **Michael J. Joyce**

My family and I wish to express our sincere thanks and appreciation to my friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of my brother. **Peter Sinkowsky**

My family and I want to express our heartfelt appreciation to all our friends, co-workers and ESO for their kind expressions of sympathy during the recent loss of our son and brother John Lanzo. **Bill and William Lanzo**

On behalf of the family of Norman Niederman we would like to thank all those who came to us in our hour of need. Your visits, calls, donations and expressions of sympathy were most comforting, helpful and appreciated. It was the force that helped to keep us going. **The Niederman Family**

EF-111A program continues to roll along

When Mark Twain commented that, "Reports of my death have been greatly exaggerated," he could very well have been speaking for the EF-111 Program. Many Grummanites, it seems, believe that the company has ceased working on the Air Force tactical jamming system aircraft entirely — not so.

"The EF-111 modification program is still very much alive. This month we are delivering the 34th of 42 aircraft that we contracted with the Air Force for back in the mid-1970s and we will continue making such deliveries through October of this year," asserts Ralph Siegel, EF-111 Program Manager.

Siegel points out that rumors of the demise of the EF-111 Program began when Grumman lost out in a bid for a new modification contract last year. The contract for the Jamming Subsystem (ALQ-99E) Upgrade on the EF-111 was awarded to the team of AIL and General Dynamics.

"AIL and General Dynamics got the contract to upgrade the ALQ-99E Jamming Sub-System (JSS) for the EF-111. What they will be doing is updating a few elements of the ALQ-99E system, including the exciter and process system, to meet 1990's threat requirements. This does not mean that Grumman is out of the EF-111 picture however. There are several other areas of the JSS that the Air Force is considering for updating and we will certainly be trying hard to win those contracts, when they develop," says Siegel.

Rolling along. *Grumman recently delivered the 34th of 42 EF-111As to the U.S. Air Force.*

Working on RFP

Grumman is currently in the process of responding to a Request for Proposal (RFP) issued by the Air Force Air Logistics Center in Sacramento, California for the integration of a new navigation and weapons delivery systems for the F-111A, F-111E, and EF-111 aircraft.

This is Phase II of what the Air Force has named AMP for Avionics Modernization Program. "AMP involves a considerable amount of modification work and would extend the life of our EF-111 program well into the future, as well as improve the reliability and maintainability of the F-111A&E's," Siegel notes.

General Dynamics has already been contracted to work on the Strategic Air Command (SAC) FB-111 aircraft and the F-111F in Phase I of the program. Siegel notes that Phase I of AMP was awarded to General Dynamics in 1983, on a 'sole-source contract' basis, prior to new laws that require competition for such contracts.

Considerable work involved

"Phase II of the program is somewhat larger that Phase I and will include work on the F-111A, F-111E and EF-111. The program also has an option to include the Global Position System (GPS), which the Air Force is considering for installation on all of its F-111 aircraft," he says.

"In Phase II, Grumman would be delivering approximately 156 'Group A' kits for the F-111A's, E's and EF's. The kits included all the structural redesign and modifications needed before you install the new Navigation Weapons Delivery systems — all the wiring, shelving, and panels in the aircraft. We would also be creating the software needed to integrate the new hardware and demonstrate its capabilities, including the new computers," explains Siegel.

Pursuing other avenues

In addition to Phase II, Siegel says the Air Force is interested in obtaining more EF-111's in the 1987 timeframe.

"Our experience in this area should give Grumman the inside track on any new conversion work," asserts Siegel. There are numerous other major modifications being considered by the Air Force for the F-111 fleet that we are deeply involved in, such as the Enhanced Joint Tactical Information Distribution System (JTIDS) and Secure Voice.

"With all these irons in the fire, I think I can safely say that, contrary to popular belief, the EF-111 program is alive and well."

Here's to a long life. *This is the Grumman Long Life Vehicle that the company recently delivered to the U.S. Postal Service for a 24,000-mile durability test on a test track at Laredo, Texas.*

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X-29 soars in second flight

EDWARDS AFB, CALIFORNIA, February 4, 1985 — Grumman's X-29 forward swept wing aircraft successfully completed its second flight here today.

The nation's first X-plane in more than a decade took off at 2:35 p.m. (Pacific Time) and stayed aloft for one hour, 10 minutes — 13 minutes longer than its maiden flight. The X-29 reached a top speed of 285 knots (328 m.p.h.), about 20 percent faster than its first flight.

"Everything went right according to schedule," says Glenn Spacht, deputy program manager for the X-29.

Grumman's Chief Test Pilot Chuck Sewell was again at the controls to guide the technology demonstrator through a series of maneuvers at altitudes of 10,000 and 15,000 feet.

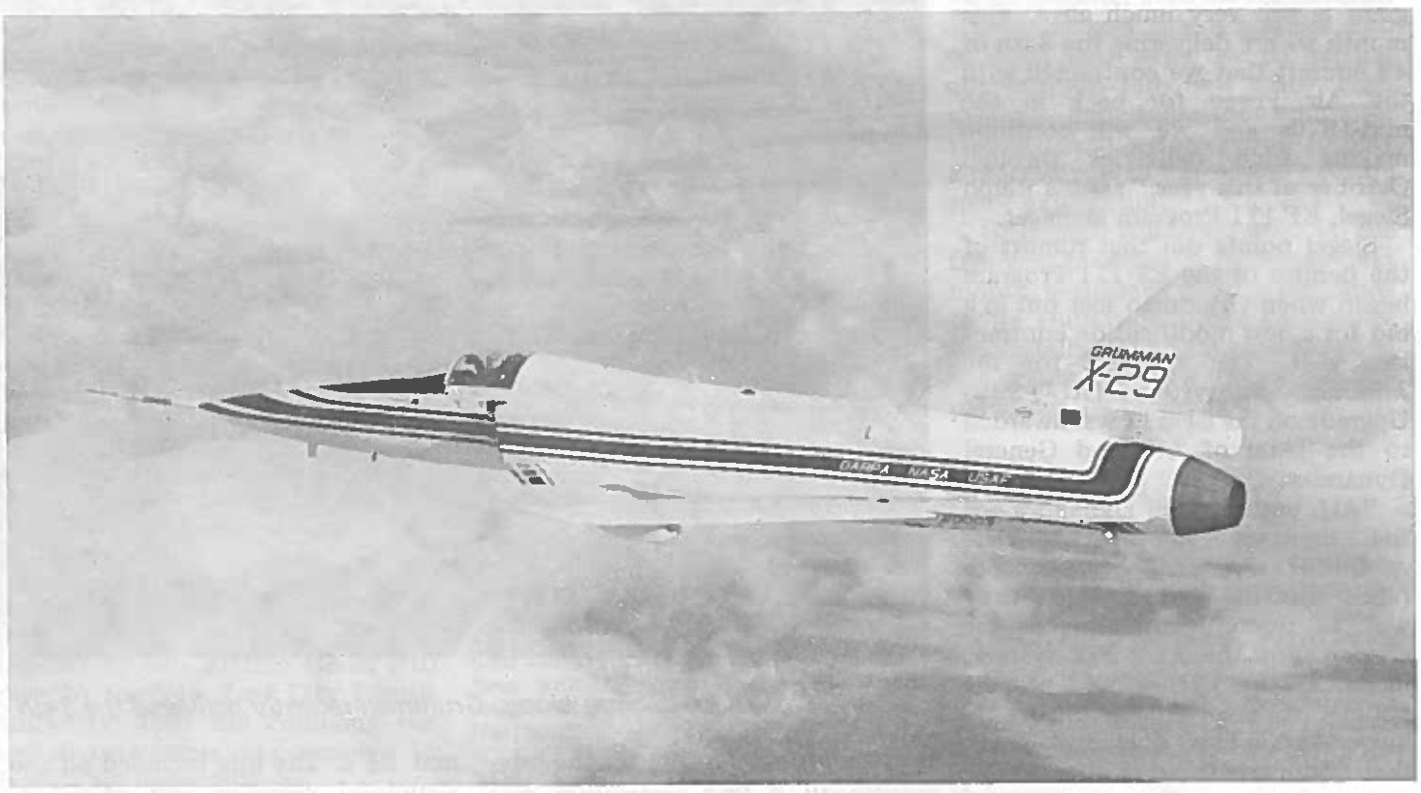
Levelling off at 10,000 feet, Sewell guided the ship through a set of maneuvers including pitch, roll, yaw and sideslip. For the first time while in flight, the X-29's landing gear was raised. The X-29 then climbed to 15,000 feet where these maneuvers were repeated and additional maneuvers were performed to test the aircraft's stability and overall flying qualities.

A touch-and-go test landing was completed, before Sewell brought the X-29 in.

The X-29 was designed and built by Grumman under a program funded by the Defense Advanced Research Projects Agency (DARPA) and monitored by the U.S. Air Force. Flight testing of the aircraft is under the auspices of NASA at the Ames-Dryden facility, located at Edwards.

The aircraft will undergo further tests of its handling characteristics, systems operations and structural integrity at speeds up to 300 knots (345 m.p.h.) and altitudes up to 30,000 feet in the two test flights remaining to be conducted by Grumman. Spacht reports that the NASA facility at Edwards will be closed down the next two weeks for computer maintenance. The third Grumman test flight will take place after the shutdown.

Following these flights, NASA will begin a four-month series of flights to expand the X-29's performance envelope to .6 Mach and 30,000 feet. Subsequent test flights are designed to test stability and controls, loads, flutter and wing divergence under more difficult conditions up to 40,000 feet and speeds up to 1.5 Mach.



Second to none. *The X-29 completed its second flight at Edwards AFB, California, on February 4. It stayed aloft for one hour, 10 minutes and reached a top speed of 285 knots (328 mph).*

C-2A Greyhound gets high grades on first flight

"It was a beautiful day, a beautiful airplane and a beautiful flight," said E-2/C-2 Project pilot Dave Seeman, after the first flight of the new reprocured C-2A Greyhound.

Seeman and co-pilot Jerry Haser, described the Greyhound's performance as "very clean and with no surprise crabs along the way."

Maiden flight. *The first Reprocured C-2A Greyhound lifted off the Bethpage runway at 11:22 a.m. on February 4.*

Seeman and Haser lifted off from Bethpage at 11:22 a.m. on Monday, February 4th and touched down in Calverton an hour and 40 minutes later.

"It was especially gratifying for me to get back into the C-2 because I was the pilot for the very first C-2 flight back on November 18, 1964," commented Seeman. "This new Greyhound is quite an improvement over what was already a fine aircraft."

Two of the major improvements to the C-2A, described as "impressive" by both Seeman and Haser, are the Greyhound's built-in self-starting ability and an "exceptional" new avionics suit. "I think the fleet pilots will be very pleased with all the new features of the Greyhound. It's truly a pleasure to fly," stated Seeman.

C-2A Program Vice-President Harvey Fromer asserted that completion of the first flight on Aircraft #20 (A-20) "marks the end of the beginning, and initiated the transition of the C-2A Reprocurement Program from the development phase to the Flight Prove-Out/ Recurring Production phase."

"Verification of specification compliance and establishment of a flight-efficient, quality-oriented production line are now the order of the day," continued Fromer. "Once again, we will be challenged. . .to meet the demanding requirements in our flight test specifications. . . to achieve better than expected learning performance. . .to beat the 13 percent projected multi-year savings. . .and to build in the product quality that puts the mark of Grumman on all our aircraft.

"While these challenges are formidable," said Fromer, "I am confident that our teamwork approach, established over the past 42 months, will make us successful."

PDOC team readies third STA for NASA

Grummanites in the Plant 5 Product Development Operations Center (PDOC) recently ventured out in the cold pre-dawn hours to roll out a newly completed aircraft: Shuttle Training Aircraft (STA) Number Three.

The newly completed STA-3 was towed across the runway to Plant 4 where it is undergoing outside ground checks including: engine runs, compass swing, weight and balance tests and fuel flow checks.

Unlike the case of the X-29, the night time move of STA-3 was not undertaken for security reasons, but rather to avoid traffic congestion on the roads and in the Plant 5 parking lot.

"The airplane is pretty large and transporting it when the roads and parking lots are empty saves a lot of headaches. Besides, it gives us a headstart on the next day's work," comments Bill Gentzlinger, STA Program Manager.

Modified engines. *PDOC aircraft mechanic Richard Harth (R) makes special thrust reverser modifications on STA-3 engines while Mike Idozise inspects the work.*

Team effort

The STA Program falls under the auspices of the Subcontracts and Commercial Products organization, headed up by Tom McGrath. While the Plant 5 PDOC team is responsible for most of the actual modification work, McGrath says: "This program is very special in that it is mostly prototype manufacturing work — making only one aircraft. PDOC is specifically designed to handle this kind of job. They, in turn, are supported by a number of different departments including Machine Operations, Milledgeville composite manufacturing, Plant 2 Detail Parts, and others who offer specific skills that we need. It's a real team effort."

Third in the line

STA-3 is the third Gulfstream II modified by Grumman for NASA for use as a space shuttle orbiter training vehicle. The modification work involves converting a Gulfstream II executive jet to NASA specifications. Once converted, the aircraft is used to simulate the flight characteristics of the space shuttle orbiter in pilot training operations.

Shuttle pilots are required to take a minimum of 30 flights in the STA, making some 800 landing approaches during their training. "What the STA does is simulate, as closely as possible the formidable task of landing the huge orbiter craft without any power. The way this is accomplished is by specially modifying a Gulfstream II aircraft with thrust reversers, special flaps and a completely rebuilt cockpit. It's not exactly like the shuttle, but it's as close as you can get," says Gentzlinger.

Used goods

Before STA-3, Grumman modified two other Gulfstreams for NASA. The major difference with the third modification project was the original aircraft itself. What NASA delivered to Grumman in November of 1983 was a used airplane. "We had a significantly harder time with STA-3 because the Gulfstream II that we started out with was a used airplane. In fact, it had about 10 years of flight service when NASA bought it. Consequently, we faced considerably different interior and wiring configurations, and a lot more work," notes deputy program manager, Tom Gillen.

Alterations. *Because the Gulfstream used for STA-3 was a used corporate airplane, its interior had to be completely removed and rewired. Joining Harth (R) in the work is mechanic Charles Randazza.*

The Gulfstream aircraft used for the first two STAs were what are known as 'greenies,' — production airplanes fresh from the factory. Working with a used airplane posed some new problems for the STA program team. "Essentially we had to undo almost as much as we had to do, if you know what I mean. The entire interior of the aircraft — which had been set up like our own corporate jet with seats and everything — had to be torn out. Also, there was very little information in the form of blueprints or design drawing available to go by. We spent quite a bit of time just trying to find where each wire went," he says.

Fitting NASA needs. *Plant 5 PDOC recently completed work on Shuttle Training Aircraft (STA) Number Three. The $14 million program involved converting a used Gulfstream II executive jet to NASA specifications for use in space shuttle orbiter pilot training operations.*

Leaving out avionics

Another significant difference between the first two STA modifications and STA-3 was the avionics system. In STA-3 Grumman has not included any avionics hardware. NASA has contracted Sperry to install a new updated digital avionics system in the aircraft when it is delivered this spring. The other two STAs will get the same new system sometime in 1986.

The $14 million third STA Program entails all structural and wiring changes, the cockpit conversion, and installation of special engine thrust reversers. The thrust reversers are used during in-flight training to simulate the drag of the huge shuttle orbiter which glides, unpowered, through the atmosphere during landing.

One of the biggest changes that is made to the aircraft as part of the modification is in the cockpit. While the pilot flight controls in the Gulfstream are normally found in front of the lefthand seat, in the STA the pilot sits on the right.

The orbiter pilot trainee is seated on the left side behind computer driven Orbiter displays and controls. The pilot trainee 'flys' the computer, resulting in the STA duplicating orbiter performance and characteristics.

Structurally, the cockpit conversion includes the installation of all the orbiter simulation equipment — new rudder pedals, throttle, rotational hand controls, speed brake, flight display instruments and cathode ray display.

Flight testing

First flight of the new STA is scheduled for early March with a March 15 delivery date to NASA Johnson Space Center in Houston, Texas. NASA's STA Project Pilot, Ken Baker will fly STA-3 from Bethpage to Calverton assisted by Grumman test pilot Tom Gwynne. While in Calverton, the aircraft will undergo a three-flight pre-delivery test program designed to demonstrate the STAs overall airworthiness.

"NASA has been hard pressed to keep up with the almost constant demand for flight training operations required by the shuttle program. Therefore, they decided some time ago that they would need a third STA. In fact, the agency is already considering a fourth STA for fiscal year 1986 and Grumman will undoubtedly be called on to handle the job. We are looking forward to the opportunity to continue our efforts as part of the Space Shuttle Program," asserts McGrath.

It really works. *Dan McNiff, a tube forming mechanic in Plant 2, kicked his 22-year smoking habit through FreshStart. 'There is no doubt that I feel much better physically and mentally for having quit smoking,' Dan says.*

Team effort. *Eileen Brobant, a systems analyst in Plant 5, says of the FreshStart Program, 'Knowing that you have the support of the group and that your support is needed by the group, is so important.'*

A means to an end. *Plant 9 Engineering manager Ralph Rosenfeld attributes his success in the FreshStart Program to determination: 'You really have to want to quit from the start for it to work.'*

You can breathe easy with FreshStart

It's not an easy thing to do — but you know it's the right thing to do. In fact, more and more people are doing it — quitting smoking. These days dropping the habit is fast becoming even more fashionable than picking it up once was. A smoldering cigarette dangling from the lip was once considered suave and sophisticated. In today's health conscious society, the premium is being put on clean lungs and a bright smile.

Dan McNiff, a tube forming mechanic in the Plant 2 Hydraulics Systems department, had been a smoker for more than 22 years. The 42-year-old Grummanite was up to two-and-a-half packs a day and he knew the shortness of breath and general lousy feeling he had wasn't getting any better.

Quitting was the thing to do

In late fall of last year, he decided that quitting was the thing to do. But he had tried quitting a number of times before — always unsuccessfully. This time, however, would be different.

After reading an article about the company-sponsored American Cancer Society FreshStart program in an October 1984 issue of *Plane News*, McNiff clipped out the accompanying information coupon and mailed it in. On February 2 of this year, it was two full months since he last had a cigarette. "And I feel fantastic," he proudly proclaims.

"There is no doubt that I feel much better physically and mentally about myself for having quit smoking," says McNiff. "Of course, I knew it was the right thing to do long before I was able to do it. The credit for my success this time all goes to the FreshStart program. It really works."

The FreshStart program that McNiff and many other Grummanites like him are applauding these days has been designed by the American Cancer Society to help people quit smoking and stay off cigarettes permanently. It consists of four one-hour, small-group sessions held over a two-week period and is based primarily on the group dynamics principle that has found so much success in similar 'self-help' programs such as Weight Watchers and Alcoholics Anonymous.

FreshStart's key concept is planning ahead, to know the pitfalls of what they will be trying to do and to be prepared to deal with what is a difficult task. Potential ex-smokers find that they can relate to each other's problems and share their experiences as they confront the various obstacles involved in the difficult quitting process.

The discussion groups offer the smoker a forum for emotional support as well as practical solutions to personal obstacles. "I tried to quit a couple of times before, but it's really tough on your own. Having others to lean on whom you can relate to and who are going through the same things you are is very important," says Eileen Brobant, a systems analyst in the Plant 5 Business Management and Analysis department.

It's a two-way street

"Knowing that the other people in the group are there to support you and that they need you to help support them, makes it almost like a team effort," she says.

A member of one of the first FreshStart sessions held in early November 1984, Brobant has not had a single cigarette since November 10. "And I intend to keep it that way," she stresses.

She had smoked one-pack-a-day for nine years before joining the FreshStart program. "I tried quitting on my own before, but I just couldn't make it last. This time, with the group support and the help of my family and my boyfriend I'm confident that I've kicked the habit for good," she says.

Kicking the habit

Ralph Rosenfeld, a Plant 9 engineering manager, is another "quitter" who is grateful for the help that FreshStart and his fellow Grummanites gave him in kicking his two-pack-a-day habit. "I see the FreshStart program as really a means to an end. You have to want to give up smoking for it to be effective for you," he points out.

Rosenfeld smoked his two-packs-a-day for 10 years before November 2 last year when he stopped cold. "The first four or five weeks were the worst. You have the physical addiction to nicotine to contend with as well as the mental habit. It's in those first few weeks of the struggle that the FreshStart group is the most helpful. It gives you that extra support when you need it the most," he says.

Another facet of the Grumman FreshStart program that Rosenfeld mentions as helpful is its convenience. "The company made the program very convenient for me by scheduling the group sessions late in the afternoon right in my plant. The fact that the meetings were easily accessible is a little something that contributes to making a difficult task a little easier," he notes.

For more information. . .

If you are interested in attending one of the FreshStart group sessions, fill out the form on this page and mail it to: Quit Smoking, A41-GHQ. You will be informed in the near future about your area's next FreshStart time and location.

Quit smoking

I'd like to quit smoking. Sign me up for the FreshStart Program.

Name . . . . . .

Mail Stop . . . . . .Ext . . . . . .

Workshift . . . . . .Plant . . . . . .

Mail to: Quit Smoking, A41-GHQ

Quality Circles work smarter, not harder

As Grumman builds for the future, one of the keys to its success will be quality. Helping to ensure that all Grumman products meet the toughest standards is Grumman's Quality Circle program.

Now in its fourth year at Grumman, the program has matured to the point where it has modified its emphasis. While the program always encourages the formation of new circles, it is also working on strengthening Grumman's present network of 60 circles.

The program's co-administrators, Joyce Sparling and Peggy Cassens, point out that unlike programs at other companies, Grumman's is entirely voluntary. Other than these two, the people involved are all part-timers, whereas many other firms have hired full-time outside facilitators. And in most cases, a circle facilitator comes from the group's own responsibility center. This has resulted in much stronger circles.

"Only 35 percent of the circles originally formed three and a half years ago have folded," Sparling notes. "That compares to an average drop-off of 75 percent during the first year alone at other corporations."

Proven technique

Several years ago, there were many newspaper and magazine articles on the concept of quality circles. They led many people to the mistaken conclusion that QCs were a fad, the latest Japanese import. Sparling emphasizes that the quality circle is a management technique that utilizes many methods long proven in American business.

Each circle consists of eight to 10 people. Its leader is usually the group's supervisor. The facilitator is often a department administrator. Both are trained in how the concept works. The facilitator attends most, if not all meetings and is there to provide advice and guidance. The leader runs the meetings.

A circle solves one problem at a time. It will identify a problem by "brainstorming" (free associative discussion) and will brainstorm a solution as well. Voting is never done. Decisions are made when a consensus is achieved. The circle then plans out and makes a formal presentation of its proposal to top management, often with winning results.

Quality Circles have historically been associated with manufacturing. At Grumman, they have thrived both in manufacturing and support areas. The first management circle, in the Product Development Operations Center (PDOC), was formed in 1983. Now in the works is a circle comprising PDOC secretaries. And the first engineering circle — which also consists of management-level employees — is in formation on the E-2/C-2 program.

A first in '84 was the launch of a circle at Grumman Technical Services, Inc., in Florida.

"There's also been a change in philosophy in the way the Quality Circles program is directed," says Sparling. "Previously, the complete responsibility rested with the Quality of Work Life office. Now, through a local advisory committee, we're looking at ways to transfer some of that responsibility to the local areas."

Cassens stresses that this strategy will bring the most results. "If the 'ownership' of a program is outside your organization, there's no incentive for you to get involved," she states.

She adds that support from management at all levels is absolutely vital. "If you start a circle in an area where it's not wanted, and it fails, you're worse off than if you hadn't started one," she attests.

It is planned that each of Grumman's major responsibility areas will have its own local advisory committee. One of the areas where QCs have enjoyed much success — and enthusiastic support from top management — is in Manufacturing.

Kal Pogoloff, a methods planner for Manufacturing and Materials Engineering (M&ME), is one of those firm believers. He is facilitator for three circles, including "Tools R Us" from the Template Shop, "The Handlers" from Manufacturing Equipment and Supplies, and "Dust Eaters" from the Plaster Shop.

Brainstorm. *Above, Tools-R-Us circle tackles a new project. In photo are facilitator Kal Pogoloff, leader Lou Hahn, Val Martinoff, Fred Pellicani, and Rose Morsellino. Left, Lumberjacks leader Bob Clare discusses a training program with Ron Hrubes, Charles Pellegrino, Mike Ramos, Tom Saccareccia, and Richard Schlegelmilch.*

Pogoloff has been involved with all three since their start, and each has its own unique style. The Handlers is the most active of the three right now, Tools R Us is somewhat less so, and the Dustbusters has waned.

Pogoloff says dormancy isn't necessarily a bad sign — the Dustbusters usually tackled work-environment issues. Within the last year, the work area has begun to be modernized, thus reducing the likelihood of environmental problems.

Indeed, surveys have shown that circles normally go through a life cycle. After three or more years, they tend to lose some of their steam — meeting less frequently, et cetera. But enthusiasm is often regained when a pressing problem arises.

The Handlers recently undertook a highly successful project. They found ways to improve control over the numerous gauges used throughout the company. The circle's recommendations are now being written into corporate procedure.

One new feature of the Quality Circles program that Pogoloff has found very helpful has been its newsletter. It's entitled "TTr^2" symbolizing the area of a circle. "It's important to let people outside the circle know what's going on, and the newsletter is also helpful in offering problem-solving advice," he states.

Sparling says one of the primary benefits of quality circles is that they enable managers to share responsibility. "This enables the manager to devote his or her immediate attention to other issues," she asserts. "That way, everybody is more productive."

A vital side benefit to circle participants is that QCs seem to have a positive effect on a person's career mobility. Cassens attributes this partly to the fact that a QC will attract some employees who are both assertive and problem solvers. But she adds that being in a circle usually encourages more reticent people to become more adept at problem solving, and better communicators. A result of this is that the person will be more confident and more visible in his or her department.

Sparling and Cassens encourage anyone interested in quality circles to call their office at Ext. 51819. "Wherever you have a group of people who work together and need to solve problems, you could form a quality circle," Sparling says.

Pogoloff says, "as people become exposed to quality circles through management presentations, they become aware of all a circle can accomplish. This can only help to spread the word that quality circles work."

'We've been challenged. Defending America as a profession is a privilege. In return for that opportunity, we've got to continually improve our business. . . .'

Future fighters, space-based radar, and Joint-STARS headlined the list of topics discussed by Gen. Lawrence Skantze, commander of Air Force Systems Command, during his recent visit to Long Island. Addressing the Air Force Association's Hap Arnold Chapter in Farmingdale, the general also emphasized the growing role of the Air Force/industry team as "consummate managers of tax dollars and able architects of aerospace defense."

"We spend a lot of money in the N.Y. area, most of it on Long Island," Gen. Skantze told attendees. The total Air Force dollars obligated to the State in FY'84 was $2.6-billion. Approximately $1.3-billion was spent in five Long Island cities alone. The Air Force completed over 3,000 contracting actions in New York last year.

"What does Systems Command expect from each contract? A maintainable, reliable, supported system that guarantees the technological edge of U.S. defense systems," stated the general.

'What is our preferred acquisition strategy? Competition. That's not just an option. Since the Competition of Contracting Act of 1984, it's the law.'

"What is our preferred acquisition strategy? Competition. That's not just an option. Since the Competition of Contracting Act of 1984, it's the law."

Discussing the Advanced Tactical Fighter which Grumman has been studying for several years now, Gen. Skantze said, "As the 21st century's fighter takes shape on the drawing boards, so does a vision shared by two of the Air Force's architects 40 years ago."

"Toward new horizons" was the report commissioned by Gen. Hap Arnold to chart the technological future of the Air Force. Dr. Theodore von Karman's words still echo for the Advanced Tactical Fighter's designers:

"It would be the prime purpose of this group to insure that the design of aircraft, of the offensive armament, and of the instruments meant to control them are coordinated so that one integrated fighting machine comes out. The present tendency to design an airplane and then hang on guns, rockets, bombs, radar, and sighting devices as a multitude of accessories must cease."

ATF: 'pilot's airplane'

"The ATF will be a reliable 'pilot's airplane,' in which man and machine function as one integrated weapon system," continued Gen. Skantze. "Technology demonstration programs, such as X-29,...are examples of efforts to improve combat capability while making the pilot's job easier.

"To that end, improvements in cockpit design will characterize the ATF. In combat, the pilot should not have to divert his attention from the outside scene or remove his hands from the controls," stressed Gen. Skantze. "Voice command will allow interaction with the aircraft while the pilot is simultaneously involved in engaging the enemy. Voice command can cut pilot workload up to 80 percent, depending on the mission."

In low-level, high-speed, multiple-target environment, the pilot is easily overloaded. "He needs to keep his head up and out of the cockpit," he said. "Helmet-mounted sights, artificial intelligence, and improved sensor trackers will provide a true heads-up capability for future pilots. I look to industry to apply them in the ATF's design.

The general also looks to industry to "make sure we can afford the plane." He admits that the ATF's requirements are many:

- It will have expanded, useable speed and altitude envelopes to improve survivability and deny potential enemy sanctuaries.
- It needs reduced infrared, radar, and visual signatures, the cues an enemy would use to hunt it down.
- Short take-off and landing flexibility will reduce its runway dependency.
- New aerodynamic designs will enhance lift, reduce drag, and improve maneuverability.
- Light, tough composite materials will mean more fight per pound.

At the core of the affordability question is supportability, stressed the AFSC commander.

A Long Island visit. *During his recent visit, Gen. Lawrence Skantze, commander of Air Force Systems Command, met with Grumman Corp. Senior Vice President Dan Huebner (R), Business Development.*

"As important as the fighter's performance goals are its reliability and maintenance (R&M) goals. They're being designed right from concept definition."

The general offered examples. The ATF's sustained sortie generation rate "has to be at least twice that of the F-15." Mobility requirements are specific. "Whereas to move a squadron of F-15s takes between 15 and 17 C-141s, the ATF goal is eight," stated the general. "Reliability improvements include built-in-test and on-board fault detection and isolation.

"ATF support has been institutionized up front — and that takes more up front R&D dollars," said the general. "But the long-term advantages like greater mission success rates, higher sortie rates, and lower lifetime system costs are too essential for the Air Force to forego."

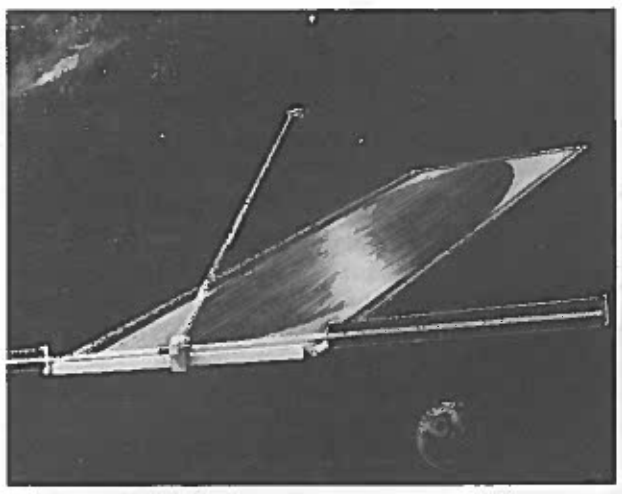
'Helmet-mounted sights, artificial intelligence, and improved sensor trackers will provide a true heads-up capability for future pilots. I look to industry to apply them in the ATF's design.'

The AFSC commander also emphasized the importance of "two next generation capabilities that will revolutionize surveillance and battle management — Joint-STARS and Space-Based Radar." He stressed that "their technological merits will sharpen this nation's warfighting edge. But it is business leverage for affordability and supportability that will clinch the resources we need to build them in the first place."

Grumman is pursuing both Joint-STARS and SBR. The Joint Surveillance Target Attack Radar System (Joint-STARS) will give the Army and Air Force an airborne system for real-time detection and targeting of trucks and tanks headed for the battlefield, and behind enemy lines. Day or night, in any weather, Joint-STARS will downlink continuous information about troop and vehicle concentrations to commanders.

"The implications for battle management are profound," continued the general. "I think if we'd had Joint-STARS to verify German activity prior to the battle of the Bulge, the German's communications silence could not have frozen our intelligence, and they couldn't have exploited weather conditions and terrain to launch a surprise attack.

"We need this system," stated the general. "And the winning FSD contractor will be working against the clock." Plans are to demonstrate a fully capable radar system in Europe in late 1989.



Space-based radar. *Reducing the weight of SBR's materials is a challenge, said Gen. Skantze. Above is an artist's rendering of one of several SBR-designs Grumman engineers are studying.*

The AFSC commander notes that "the RFP for Joint STARS's *FSD* hit the streets with two selection criteria: technical/logistics and cost/price. Only one of the two is color-coded: technical/logistics. Whoever gets Joint STARS will have won with a strong proposal for supportability, maintainability, and reliability."

Space-based radar: eye to the future

Looking farther into the future, the general pointed out that a revolutionary global atmospheric surveillance capability may be realized through the development of space-based radar or SBR. Though only in concept study at the Air Force Systems Command, the SBR is an antenna — that could be as large as a football field — deployed in space. "The technical challenges are formidable," said Gen. Skantze. "For starters, with current technologies, we can't even launch the system."

Reducing the weight of SBR's materials is a challenge. "We'll have to develop microwave monolithic integrated circuit (MMIC) transit/receive modules smaller than a quarter and weighing even less. The MMIC t/r modules would be building blocks of the spacecraft, produced by the millions — and produced economically." They would be integrated into the large structures of the antenna.

Computer processing technology is another driver. The Air Force will require real time on-board signal processing to reduce radar data to identify the tracks.

'The contract goes to the bidder whose past performance and present proposal prove he can design a reliable system and produce it within cost and on schedule.'

"We'll look to industry for hardware and software advances," said Gen. Skantze. "Some have already moved out with IR&D for SBR. In fact, Grumman has a brassboard demonstration scheduled soon. It's the phased array lens demonstration membrane — an antenna."

The cost of fielding a space-based radar system will affect decisions to go or not go with development, stressed the general. "Exploiting emerging technologies is part of the answer to many questions. What materials could withstand battle damage SBR might see? Would industry find ways to produce and launch the system efficiently? How will new technologies change maintenance and support requirements?

"One thing's for sure. If we go out for proposals for an SPR design, logistics will rank up there with cost and performance. The complexity and cost of such a system require that support be designed in. The National Security demands no less."

Procurement modernization — a must

Air Force modernization through these systems — and others on the drawing boards — has to be accompanied by procurement modernization, urged Gen. Skantze. "The operational utility of our systems is rooted in how well reliability, maintainability (R&M), and producibility are integrated in the design process. For all future designs, we will single out these three parameters as specific evaluation criteria items.

"All Air Force contractors will have to focus on the same goal to stay in the game," he continued. "I have directed my buying divisions to rank R&M and producibility first when they go out for new designs. They are to instruct industry to demonstrate precisely in proposals how they will assure that R&M and producibility are weighed in designs.

"This is not business as usual," warned the general. "In the past, we usually stuck with development contractors through production. We're not necessarily doing that anymore. The contract goes to the bidder whose past performance and present proposal prove he can design a reliable system and produce it within cost and on schedule. To do that, he's got to put together, up front, a design team that includes quality, manufacturing, and applications engineers."

The transition from drawing boards to the factory floor is critical, emphasized the general. "It's only possible through up-front, realistic thinking about producibility.

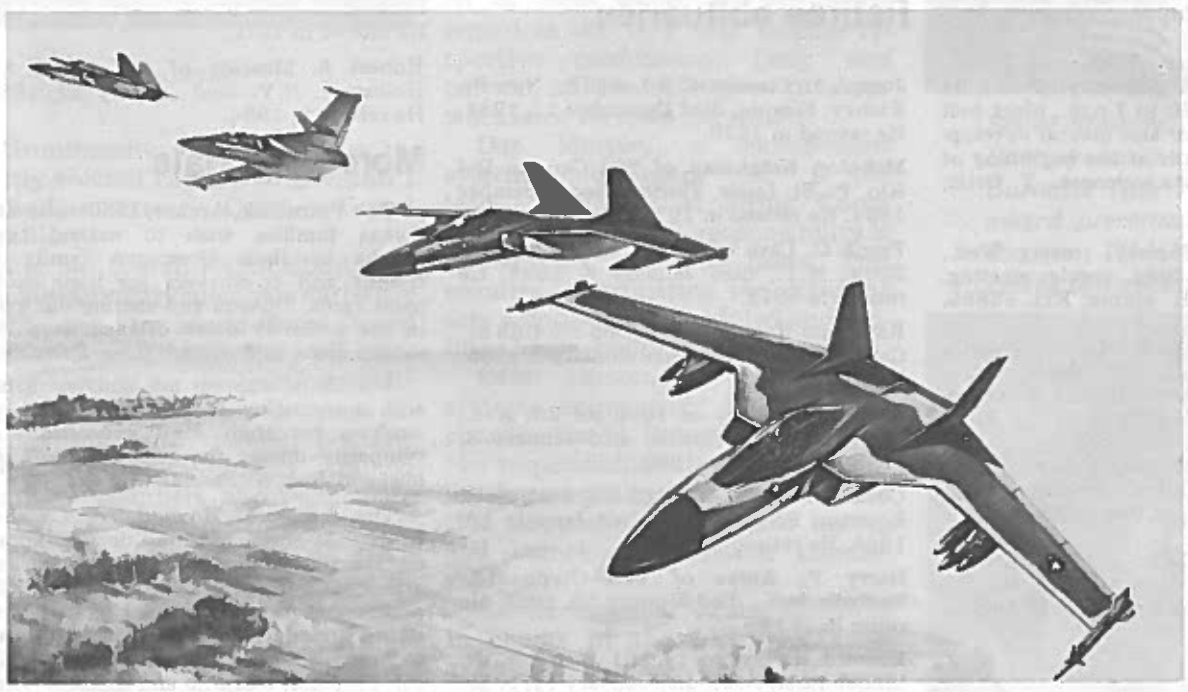
"Through sound business strategies, we can turn back the costs of successor systems. That's more than an opportunity. It's a responsibility — one that Congress and the public are not convinced the defense/industry team has always met," he said. "It's no secret that Congress views defense procurement with a jaundiced eye. The perception is that if DoD can't be trusted to buy claw hammers and allen wrenches, how can we be trusted to buy new missiles and fighters? And so, legislation of defense procurement has increased. One recent law is the Competition in Contracting Act. This year, it will impact the way we do business."

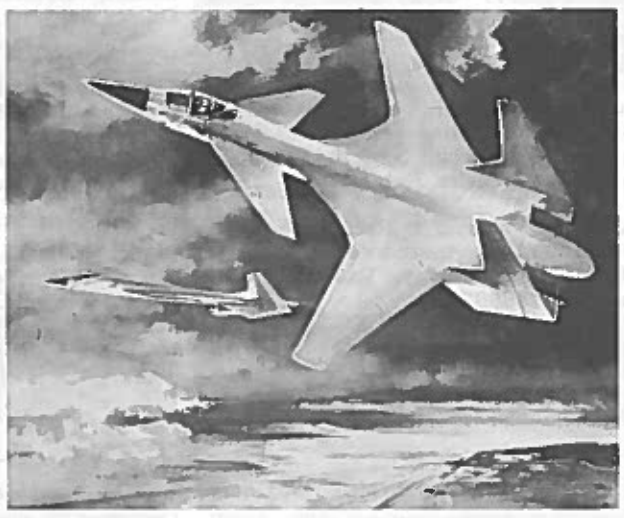
'This is not business as usual. In the past, we usually stuck with development contractors through production. We're not necessarily doing that anymore.'

The law is a wholesale reform of the procurement statutes covering DoD and civil agencies. It takes effect April 1, 1985.

The AFSC head said that sole-source approval levels are specific. "Scrutiny will be tough, and time-consuming." Any non-competitive Air

(Continued on page 10)





What does the future hold? *Grumman has been studying numerous aircraft design concepts for the next generation of fighters. Here are just a few of the many designs being studied by Grumman engineers.*

'We've been challenged'

(Continued from page 9)

Force acquisition over $1 million goes to AFSC for approval. Those over $10 million have to be approved at the Secretary of the Air Force level.

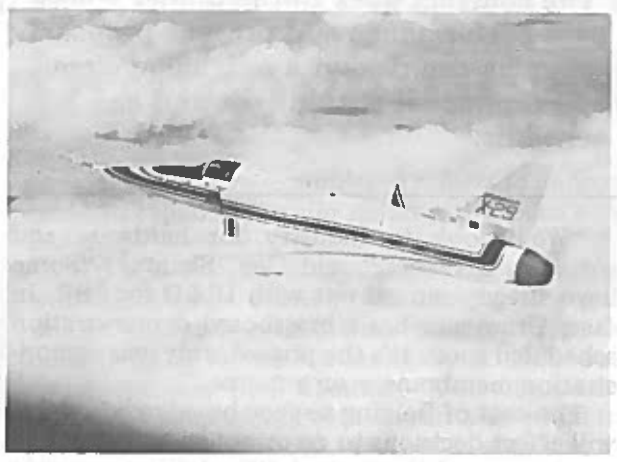
"I don't plan to let too many sole source actions through," predicted Gen. Skantze. "AFSC is not going to let targets of opportunity for competition slip by. When at all possible, my competition advocates at headquarters and in the field will turn non-competitive actions around.

The general reported the recent case of one contractor wanting $6 million for a system test set. "We thought again, and competed it. The contract went to a second source. It was for $1.5 million."

Competition's practicality will be considered in every phase of every acquisition, warned the general. "Don't get too comfortable.

"Targets of opportunities for competition don't end at the prime level," he added. "We want more competition at the subcontractor level, too."

In those cases, where the Air Force sees sole-sourcing by a prime, it may require the prime contractor to develop dual sources. "Our leverage is at the negotiating table," the general stressed. "For example, the RFP for the ATF demo/validation asks our seven concept contractors point blank how they'll compete subcontracts. When we downselect to three, those answers will matter. . . ."



A sign of the times. *'Technology demonstration programs, such as the X-29, are examples of efforts to improve combat capability while making the pilot's job easier,' said Gen. Skantze.*

The Air Force emphasis and congressional insistence on competition will require serious resource planning within government and industry, stressed Gen. Skantze. "We both need expert staffs. . . ."

The law and lawmakers are clear. Currently, there's an ad hoc subcommittee on defense in the Senate Armed Services Committee. More oversight is likely, said the general. He looks to the Air Force's partners in industry to help dispel inefficiencies that might result from single sourcing.

Gen. Skantze emphasized that the only way the Air Force is going to afford future defense systems is by convincing Congress and the public that the Air Force/industry team members are "consummate managers of tax dollars and able architects of aerospace defense."

'With an uncommon advantage'

Concluded the general: "We've been challenged. Defending America as a profession is a privilege. In return for that opportunity, we've got to continually improve our business. We proceed with an uncommon advantage — technological and intellectual capabilities that are preeminent in the world."

calendar

AIAA: Thur., March 21, Antun's Old Country Manor, Hicksville, 5:30 p.m. Dinner meeting. Topic will be "Earth's Exploration of the Solar System 1985-2000." Guest speaker will be Louis D. Friedman, ex-director of the Planetary Society. Guests welcome. J. Kohn, Ext. 58754.

Aikido Club: (Martial Arts) every Wed., 5 p.m., Recreation Bldg. Black belt instructors, beginners class. Guests welcome. M. Brooks, 391-6157 or H. Brondo, Ext. 56472.

Alcoholics Anonymous: every Mon., 4:30 p.m., Plant 15 conference room C, closed meetings; Personnel Relations, Ext. 53521. Great River meetings: every Wed., 4-5 p.m., T. Conley, Ext. 53521. Calverton: Chemical Dependency Discussion Group, every Mon., 4-5 p.m., Flt. Test Center, new conference meeting room, open meeting, Personnel, 369-6759; C. Robb, Ext. 117-70038.

Amateur Radio Club: every 3rd Wed. of the month. Meeting held in the white shack on top of Plant 5 by the blue ball, 5 p.m., Bert Wengler, Ext. 50188.

Chess Club: every Fri., Recreation Bldg., 5 to 11 p.m. Beginner to expert, guests welcome. K. Marley, Ext. 54901/N. Corso, Ext. 59600.

Coin Club (Calverton): every Fri., lunchtime, Plant 6, A-6 Action Center conference room. Grumman employees welcome. N. Evangelides, Ext. 117-7242.

Computer Club: 1st Mon. of every month, Recreation Bldg., 7 p.m. Computer discussion and demonstration/ beginner to advanced programming. Guests welcome. J. Hayne, Ext. 54945/ H. Baluta, Ext. 50389.

Dance Club: every Wed., 5-8 p.m., Recreation Bldg. Guests welcome. S. Koppell, Ext. 115-3800.

Duplicate Bridge Club: every Thur., Recreation Bldg., 6 p.m. Guests welcome. Sid Stone, Ext. 59854.

Equestrian Club: every weeknight, Knoll Farm, Brentwood, 6 p.m. Grumman employees and immediate family only. P. Morrison, Ext. 57505.

Fencing Club: every Wed., 4:45-6:30 p.m., Recreation Bldg. Free instructions, guests welcome. J. Hayne, Ext. 54945/ P. Chaldaris, Ext. 53486.

Folk Dancer's Club: (Calverton): every Thurs., 2nd floor, Plant 6, lunchtime, Grumman employees only. J. Hamelman, Ext. 117-6835.

Grumman Baseball Card Club: first Wed. of every month, 12-12:30 p.m., Plant 25 conference room. S. Froehlich, Ext. 52508.

Klown Klub: every second Tues. of each month, Recreation Bldg., 4:15 p.m. Guests welcome. M. Deyns, Ext. 57564.

Karate Club: every Tues. and Thurs., Recreation Bldg., beginners 4:30 to 5:30 p.m., advanced 5:30 to 7 p.m., black belt instructors, physical and mental development. New students at the beginning of each month. Guests welcome. T. Ortiz, Ext. 58497.

Model Railroad Society: every Wed., 7 p.m., Recreation Bldg., regular meeting. Guests welcome. R. Muntz, Ext. 56865.

Magic Club: last Wed. of every month, The Magic Shop, Mid-Island Plaza, Hicksville, 4:45 p.m. Guests welcome. M. Lichaw, Ext. 56114.

Roller Hockey Club: every Sun., 1 p.m. For more information, employees can call Arnie Pritchett on 934-8402.

Roller Skating Club: every Thurs., Levittown Skating Rink, lessons at 6:30 to 7:30 p.m. Guests welcome. H. Denen, Ext. 52291.

Stamp Club: first three Wed. of every month, 5-6 p.m., Plant 35 cafeteria, trading sessions and discussions. S. Hoops, Ext. 53926.

Table Tennis: every Fri., Recreation Bldg., 4 p.m., and on Sunday at 9 a.m. Open to all, both Grummanites and general public. Jim Pope, Ext. 53008.

Tap Dancing Club: every Mon., Recreation Bldg., beginners 4:30 to 5:30 p.m., intermediate 5:30 to 6:30 p.m. Guests welcome. P. Tropea, Ext. 52260.

Theater Guild: meetings held the first Tues. of each month, Annies Restaurant, Bethpage, 5:30 p.m. Guests welcome. Tom Dalton, Ext. 51825 or Marian Stange, Ext. 59668.

Toastmaster Club: every Wed., GHQ Bldg., third floor conference room A, 5 to 7 p.m. Grumman employees only. Bill Ptucha, Ext. 55457 or Dick Maemone, Ext. 55503.

Retiree obituaries

Joseph L. Ciaccio of 8 Lake Dr., New Pt. Richey, Florida, died December 12, 1984. He retired in 1970.

Maholon Ketchman of 254 Camino Del Rio, Pt. St. Lucie, Florida, died December 1984. He retired in 1970.

Frank C. Cava of 45 No. Main St., Pearl River, N.Y., died January 4, 1985. He retired in 1972.

Raymond Repperger of 1206 SE 40th St., Cape Coral, Florida, died January 5, 1985. He retired in 1977.

Arnold Brodbeck of 1080 SE 9th Ave., Pompano Bch., Florida, died January 6, 1985. He retired in 1962.

Cosmo D'Errico of 1918 SW 16th Ave., Boynton Bch., Florida, died January 10, 1985. He retired in 1976.

Harry P. Antes of 956 Clyde Rd., Baldwin, N.Y., died January 10, 1985. He retire in 1975.

Richard H. Bowers of 101 Birs Ave., N. Lindenhurst, N.Y., died January 11, 1985. He retired in 1972.

Bert Lowery of 10 Washington St., Hempstead, N.Y., died January 13, 1985. He retired in 1965.

Thomas A. Gray of 87 Raynor Rd., Ridge, N.Y., died January 13, 1985. He retired in 1980.

Frederick Piercey of 82 Crown Point Rd., Hubert, N.C., died January 17, 1985. He retired in 1977.

Louise M. Nelsen of 218 Second St., Hicksville, N.Y., died January 18, 1985. She retired in 1977.

Anthony V. Mesiano of 159 Moore Ave., Massapequa Park, N.Y., died January 20, 1985. He retired in 1975.

Joseph Keller of 311 Paumanack Vlg. Dr., Greenlawn, N.Y., died December 12, 1984. He retired in 1976.

Dudley W. Field of 2170 Gulf Shore Bl. #71W, Naples, Florida, died January 9, 1985. He retired in 1967.

John L. Kluge of Madison St., Sag Harbor, N.Y., died January 21, 1985. He retired in 1970.

Robert E. Moseley of 252 Leona St., Holbrook, N.Y. died January 22, 1985. He retired in 1984.

More personals

The Petruchik, Archer, DiSilvestro and Dykas families wish to extend their thanks to their Grumman family of friends and co-workers for their cards, mass cards, flowers and sharing our grief in the untimely death of their daughter, sister, niece and friend, Lisa Petruchik.

I wish to express my sincere thanks and appreciation to my friends and co-workers for their kind expressions of sympathy during the recent loss of my husband Joseph. Pauline Civitana

The family of Howard Tripp wishes to express our thanks and deepest appreciation to his many friends, co-workers and ESO for their kind and thoughtful expressions of sympathy during his recent illness and death. Howie was very proud to have been part of the Grumman family for 43 years. Marjorie and Michael Tripp and Carol Ann Merritt

people

To the rescue

Three Grummanites — Mike Armstrong, Hap Scholl and John Conway — were recently honored by the commander of Fighter Airborne Early Warning Wing, U.S. Pacific Fleet, with aviation safety awards. The three hail from Grumman Operations at Pt. Mugu, California, and are currently assigned to the F-14 Contractor Maintenance Team at NAS Miramar, San Diego.

The three received their safety awards because of their actions taken on September 28 last year. Mike, Hap and John observed smoke emitting from an hydraulic jenny that was being used on a VF-51 aircraft. Further investigation revealed that the jenny was on fire. John safely secured the aircraft and powered it down, while Mike and Hap extinguished the fire and removed the unit from the hangar. Their quick reaction and clear thinking averted a catastrophy and possible loss of life.

To the rescue. *The Navy recently saluted three Grummanites — John Conway (2nd L), Hap Scholl (C-L), and Mike Armstrong (C-R) — for their quick reaction to a fire at NAS Miramar. On hand at the awards ceremony were: Charles Brown (L), director of Grumman Operations at Pt. Mugu (Calif.); Charles Farrell (2nd R), supervisor of the Grumman Maintenance Team at NAS Miramar; and Cdr. James Dodge, F-14 Weapon Systems manager at Miramar.*

Capt. Jim Smith

Jim Smith

Grummanite Jim Smith was recently elected captain of Division I United States Coast Guard Auxiliary.

Jim has overall responsibility for the 200 auxiliary members currently within the Fire Island Coast Guard Station area. The auxiliary provides many services to the boating public including courtesy motor boat examinations, and public boating education. These highly trained auxiliary members also participate in search and rescue missions.

The new U.S. Coast Guard Auxiliary captain has been working at Grumman since 1951 and is currently working on the E-2C CLAMP program in Integrated Logistics Support (ILS).

Silver Snoopy

Astronauts Guy Gardner and Frank Chang recently visited four Grumman Technical Services Inc. (GTSI) employees and presented them with the coveted Silver Snoopy Award, at Kennedy Space Center in Florida.

Honored Grummanites were Dan Murphy and Cara Parson, both from Launch Processing System Computer Operations; Bruce Moran, Instrumentation and Measurements; and Stephanie Burnette, Administration.

The Silver Snoopy is the unofficial insignia of the Shuttle astronauts and their personal award for professional excellence. It is awarded to those whom the astronauts regard as the very best in their respective professions. Only one percent of the total space program workforce receives the award.

Dan Murphy, a management systems coordinator "A," is the lead coordinator in Firing Room No. 2. His primary responsibility is to support the set's users. This requires coordinating the different sets according to scheduled and redlined loads, builds, and supports.

Cara Parson, a management systems coordinator "A," is lead coordinator in Firing Room No. 1. Her responsibilities include monitoring for anomalies and set configuration support for hardware testing and launch as a master console analyst.

Senior engineer Bruce Moran is in charge of the Instrumentation and Measurements Wave Analysis Laboratory. He is responsible for processing Shuttle launch environmental data into engineering information such as acoustic, vibration, pressure, and strain.

An administrative associate, Stephanie Burnette's duties include presentations, public affairs, Employee Services, Recreation, tuition reimbursement and editing the GTSI newsletter, along with other administrative tasks.

Silver Snoopy. *Astronaut Guy Gardner (above L) presents Silver Snoopy achievement awards to Bruce Moran (top L) and Stephanie Burnette (top R), while Astronaut Frank Chang (below) makes the award presentation to Cara Parson (bottom L) and Dan Murphy (bottom R). Only one percent of the space program workforce receives this coveted award.*

New assignments

The following Grummanites recently received new assignments:

ENGINEERING: Allan Hiltunen, project engineer, A-6E (U) Avionics Design, Plant 40; John Hanish, project leader, E-2C Systems/Software Requirements and Integration, Plant 14; Thomas Gould, project leader, F-14 Software Development, Plant 1; Joseph Baumgartner, engineering specialist, Fusion Structures, Plant 272; Frank J. Loehr, group leader, System Operations and Resources, Plant 105; Edward Lombardo, engineering specialist, Composite Structural Analysis, Plant 107; Carlos Paez, project engineer, E-2, Design Engineering, Plant 25; Charles Squires, technical specialist, Dynamics Integration, Plant 35; Dr. Gerald R. Stoodley, technical specialist, Engineering Computer Systems, Plant 5; Joseph Zalesak, engineering specialist, Computer Aided Structural Analysis, Plant 35; William Abramson, engineering specialist, System Development and Applications, Plant 35; Donald A. MacKenzie, engineering specialist, Equipment and Applications, Plant 35.

CALVERTON OPERATIONS: Joseph Goodwin, supervisor of F-14/EF-111 Production, Plant 7.

Looking for scoops

Plane News is always looking for scoops. If you know of a fellow Grummanite who deserves company attention on the "people" page, please drop us a line: *Plane News*, C14-05, Ext. 53293.

N. Burdo | G.A. Soltan | L.M. Heithaus | J.J. Murphy | R. Pascucci | J.M. Keane, Jr. | T.P. McCarthy | C.B. Clark | E.J. Burke

G.H. Stelljes, Jr. | M. Vanderhoof | W.P. Woltmann | T.A. Campo, Jr. | M.W. Kitchen, Jr. | J.J. Klevanosky | C.P. Gudelis | J.M. Rogers

service milestones

40

Eugene Jeskin, Tool Cont. (2)
William A. Heuslein, Executive Staff (5)

35

Warren A. Lipman, Mech. Process Eng. (2)
John Teufel Jr., Est. Tech. (5)
John J. Falque, Mech. Det. & Fin. Temp. (43)
George E. Bennett, Prod. Rel. & Anal. (43)
Robert G. Vanderbilt, Distr. Serv. (111)

30

Amedo A. Missale, Tool Maint. & Repair (1)
Mario C. Lombardo, Vech. Struct. Anal. (1)
Warren Strong, Assy. Methods (2)
Stanley Hajek, Prod. Plann. (2)
Lee H. Stacey, Maint. Admin. (2)
Frederick E. Balk, Supt. Equip. Prod. (5)
Edward J. O'Donnell, Mgmt. & Staff (5)
William F. Kiesel IV., Fld. Pwr/Pyrot. (5)
Salvatore C. Salina, Ops. Anal. (5)
Robert W. Butts, Hyd. Subs. (6)
William G. Swamback, Prod. Mgmt. (6)
Frank Lucas, Matl. Ops. (6).
Richard J. Stubbe, Struct. Sys. Prod. Supt. (6)
Frederick J. Taylor, Airport Ops. (7)
William J. Morley, Hyd. (14)
George R. Schriro, Struct. Mech. (35)
Louis G. Kaufman II., Fld. Dyn. (35)
Charles A. Farell, Funct. & Proj. Admin. (35)
Willis D. Carpenter Jr., Qual. (77)
Gordon H. Ochenrider, Sr. V.P. Washington Ops. (250)

25

Nicklais Burdo, Central Setup Area (2)
George A. Soltan, Maint. (3)
Loretta M. Heithaus, Dist. Serv. (4)
John J. Murphy, Av. Des. Proj. Mgt. (5)
Rudolph Pascucci, Flt. Ops. Insp. (7)
John M. Keane Jr., Mfg. Sch. (9)
Timothy P. McCarthy, Maint. (12)
Joseph Sicari, Maint. (12)
Carlon B. Clark, Elect. Test (14)
Eugene J. Burke, Systems Rel. (25)
George H. Stelljes Jr., Tech. Pres. Serv. (25)
Marylou Vanderhoof, Prop. Acct. (30)
W. Peter Woltmann, Tech. Dev. Mgt. (35)
Thomas A. Campo Jr., Prod. Train. Mgt. (35)
Frederick M. Barth, Instruct/Anal. (39)
Milton W. Kitchen Jr., Tech. Reqmts. (40)
John J. Klevanosky, Qual. Ops. (43)
Charles P. Gudelis, Finance & P.C. & B. (77)
John M. Rogers, I.R.M. Prog. Mgt. (105)
Peter J. Schmidlin, A/C Avion. Sys. (281)

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Vito N. Lefemine, ILS Retrofit Eng. (1)
Seymour Dotz, ILS Res. Cont. (1)
Joseph T. Feddern, Display Inst. & Lt. (1)
James H. Jacquette, Pwr. Gen. & Conver. (1)
Aaron Rabinowitz, Soft. Appl. (1)
Carl J. Echols, Prog. Mgmt.-F-14A (1)
Emil Babyak, Prototype (2)
Richard G. Harwell, Tanks & Ducts (2)
Otis A. Adams, Wing Inner Panel & Combo (2)
Frank P. Bambara, EWB-Final Assy. (2)
William H. Brown, Prod. Superv. (2)
Francis Pelkowski, Weld Grp. (2)
John J. McKinnell, Stockrooms (2)
Raymond Santiago, Die Shop (2)
Richard J. Herman, Cent. Storage & Ret. (2)
Paul C. Sottung, Cent. Storage & Ret. (2)
Edward W. Brown Jr., Cent. Storage & Ret. (2)
Donald J. Thomas, Parts Paint (3)
Gustavo L. Hudo Jr., Prod. Super. (3)
Victor E. Pierno, Mach. Oper.-Tech. Serv. (3)
Dominick T. Mastandrea, Ops. (3)
William E. Gallagher, Ops. (3)
Ernest A. Kostner, Tool Insp. (3)
Joseph Reiter Jr., Veh. Lia. Eng. (4)
Michael J. Kenny, Res. (4)
Rubin Kreis, FTT Sys. (4)
Anthony J. DiMartino, Q.C. Mgt. (4)
Jack J. Nuccio, Elect. Insp. (4)
John H. Grim Sr., Static Test (5)
Eric L. Cullis, Static Test (5)
George Stephen, Final Assy. Struct (5)
William R. Caspersen, Final Assy. Struct (5)
Jack B. Diana, ILS Mech. Equip. Eng. (5)
Bernard R. Savoie, Crew Sys./Equip. Integ. (5)
Michael Vele, Sys. Des. (5)
Mary R. Fredel, Fin. Secty. Serv. (5)
John Cirami, Corp. Inst. Sys. (5)
Gerald J. Daly, Prog. Cont. (5)
Gerald T. Heinzman, Bus. Ops. Mgt. (5)
Thomas Bradshaw, Instr. Test (6)
Richard J. Redding, Engines (6)
Frank M. McCroy, Struct. Sub. (6)
Lawrence C. Smith, Mach. Shop (6)
Jack. R. Risalvato, Q.C. Mgmt. (6)
Alec R. Harvey, Prog. Coord. (6)
Stephanos Gajdjis, FTT Perf. & Propul. (7)
Reinaldo Gonzalez, Flt Ops. (7)
Robert D. Smith, Pl. Matl. Stor. & Distr. (7)
Robert J. Fitzgerald, Eng. Mgr. (7)
Frank R. Leitner, Mfg. Prog. Mgt. (9)
Paul Shaw, Metallurgical Eng. (9)
Douglas J. Howard, Tool Insp. (11)
William F. Oelcher Jr., Adv. Matl. & Process Dev. (12)
Richard Poggie, Instr. Test (13)
Michael J. Keaveny Jr., Hydraulics (14)
Thomas J. Veltri, Struct. Sys. Test Staff (14)
John G. Courtney, Elect. Des. & Dev. (14)
William Austin, Display Instr & Lt. (14)
Hugo Ritucci, Engr. Dev. Mgt. (14)
Ernest W. Wiebke, Repro. Serv. (15)
Cesare J. LoPalo, Camera Graphics (15)
Lewis L. McCormack, ILS Pub. Mgmt. (15)
Philip J. Ivone, ILS Pub. Proj. Mgt. (15)
James V. Stanley, ILS Tech. Writing (15)
James F. Murphy, ILS Tech. Writing (15)
Matthew R. Moss, ILS Pub. Proj. Mgmt. (15)
Walter J. Kissam, ILS Pub. Cont. (15)
Philip L. Harvey, Raw Matl. Ops. (17)
Aaron M. Caylor Jr., Trans. (20)
Thomas J. Carson, Trans. (20)
Edward J. McCue, PPO E-2 (25)
Timothy J. Higgins, ILS Elect. Pkg. (25)
John W. McCuen, ILS Ops. Supt. (25)
John W. Roman Jr., Struct. Des. (25)
Theodore Aronow, Pwr. Pl. Des. (25)
John J. Queally, Sys Reliab & Data Anal. (25)
John F. Sims, Wt. Optim & Tech Dev. (25)
Eugene M. Quarello, Ops. (25)
William J. Sheridan, Ops. (25)
Frank J. Carroll, Ops. (25)
Cesidio P. Pietromartire, Conf. Data. Mgmt. (25)
Stewart A. Epstein, Proc. Ops. Info. Sys. (30)
Arthur J. Icart, Repair Cont. (30)
Harry G. Daum, Corp. Proc. Ops. Mgt. (30)
William S. Nichols, Gen. Subcont. (30)
Joan C. McGuckin, Gen. Subcont. (30)
Joseph R. Russo, Fac. Admin. (30)
William P. Jacob, Elect. Eng. Pwr. (30)
Ida Haefele, Q.C. Proc. Matl. Plan. (30)
Eugene P. McCormack, ILS Ops. Supt. (35)
Robert A. Biasotti, Cont. Dev. (35)
Vincent M. Seidita, Flt. Cont. Staff (35)
F. E. Hendricks, Sys. & Cont. (35)
Ronald Tarpinian, Sys. Dev. & Integ. Proj. Mgt. (35)
Frank J. Sartori, Router & Shear (37)
Ronald M. Scholer, ILS Prog. Mgt. (40)
Anthony Rubertone, ILS Equip. Des. Eng. (40)
Julius J. D'Antonio, Cust. Supply Reqts.

(Continued on page 16)

A great way to raise your technological IQ

It sounds almost too good to be true: finishing one's college education, thereby improving career opportunities, and at the same time spending two years living out West. That's what Ken Carlino and Paul Wicelinski, juniors at Arizona State University, are presently doing.

Carlino and Wicelinski are two of the 11 Grummanites now enrolled in a program that enables them to earn bachelors degrees in manufacturing disciplines. The 11 are recipients of the 1983 and 1984 Grumman Manufacturing/Technology Scholarships, which defray up to $4,500 of tuition and expenses.

The Grumman scholarship is available to Grummanites and Long Island students who have a two-year associates degree in mechanical engineering, or who have completed the first two years of an engineering curriculum. All eight previous graduates are now permanently employed in the Manufacturing Department.

Diversified training

Recipients enroll in accredited programs in manufacturing engineering, manufacturing engineering technology, or manufacturing technology. These curricula include subjects such as numerical control programming, tool design, materials engineering, manufacturing economics, methods planning, processes, metallurgy, quality control, computer aided manufacturing, and others.

Many of the colleges that offer this curriculum are located in the West — which is one of the reasons why Carlino and Wicelinski chose Arizona State. Other Grumman students attend the New Jersey Institute of Technology, Weber State College (Ogden, Utah), Utah State University, Central Connecticut State College, and Rochester Institute of Technology.

Fred Neuscheler of Grumman's Manufacturing Department notes that such programs are fairly new — there are less than 20 nationwide. While SUNY-Farmingdale has a very good two-year program, there is no accredited four-year program on Long Island. The nearest school a Long Islander could commute to is New Jersey Institute of Technology.

"Farmingdale is attempting to start a four year program, but it first has to be approved and funded by New York State," Neuscheler says. "Such a program would be fantastic for Long Island students."

Jim Bronnenkant, a June '84 graduate of Weber State, is now back at work at Grumman. He previously went to SUNY-Farmingdale for two years at night while working at Grumman in the Machine Shop. "Without the program, I probably would've gone to night school for my four year degree," says Bronnenkant, who used Grumman's Tuition Reimbursement Program to defray the cost of his studies at SUNY-Farmingdale. "And it would've taken me three or four times as long."

Crucial training. *Jim Bronnenkant (L) reviews a drawing with Clint Watson in the Bonding-Composites group. Bronnenkant, who graduated last year from Weber State, says his college studies would have taken three to four times as long if he had worked full time and gone to night school.*

First class. *Cathy Grastataro was the first graduate of the Grumman Manufacturing/Technology Scholarship program. She graduated from Weber State College, Ogden, Utah, in '82, then came back to Grumman. She's presently doing tool engineering for Composites and Non-Metallic Processes.*

Bronnenkant returned to work in July and began the year's rotation among a variety of departments that all new manufacturing engineers undergo. He first worked in Optical Tooling. Now, he's part of the Bonding-Composites group. "It gives you a good idea of what goes on in manufacturing throughout the company," he attests.

Varied backgrounds

The scholarship program attracts a mix of students who are fresh out of a two-year college and those who have been working at Grumman for some time. For instance, upon receiving his associate degree, Paul Wicelinski worked at Grumman for one and one-half years. Ken Carlino, on the other hand, completed his associate degree last year and worked at Grumman during the summer of '84 after winning the scholarship.

Carlino and Wicelinski share an apartment about one mile from the campus. Curiously enough, Wicelinski's brother was Jim Bronnenkant's roommate at Weber State, which was how Wicelinski first became aware of the Grumman scholarship.

Rooming with a fellow Grummanite has worked out well for both men. They decided to shop for an apartment together after learning that the dorms were booked up. As it turned out, they only had one class in common — Welding Survey. Since the course was fairly rigorous, being able to study together was an advantage.

Carlino says the atmosphere in an Arizona college is very casual — for example, professors prefer to stay on a first-name basis. "But they still pile on the work," he jokes.

All three men found the scholarship program to be well suited to their needs. "I had a friend in a college out West who was enrolled in a similar curriculum, and I decided that's what I would study. But I wanted to work awhile before going back to school for my four-year degree," says Wicelinski. "So the Grumman scholarship program was ideal for me."

Both Wicelinski and Carlino selected Arizona State on the strength of its manufacturing engineering technology curriculum. However, the warm Arizona weather is a nice perk.

A 'hands-on' discipline

Carlino chose manufacturing engineering technology over "straight" engineering because in the latter, "there isn't as much exposure to the shop floor," he says. He considered going to school in New York state, but felt the time spent out West would better meet his educational needs. "It's a fairly small department — even though the university is very large — and it is one of the best in the country for manufacturing engineering technology," he says.

Another six scholarships are to be awarded for fall '85. If you are interested in learning more about the Grumman Manufacturing/Technology Scholarship, contact Fred Neuscheler at Ext. (111) 58268. Applications must be submitted by March 15.

"If manufacturing engineering is what you want, and if you couldn't normally afford to go to college without also working full-time, this is an excellent program," says Bronnenkant. "Plus, you have a guaranteed job when you satisfactorily complete your studies. That's a good deal."

scorecard

Abracadabra

The Grumman Magic Club is once again opening its act to new members for 1985. Prestidigitators and magicians — from beginners to experienced artists of illusion — are invited to attend the club's monthly meetings.

Meetings are held on the last Wednesday of each month downstairs from the Magic Shop in the Mid-Island Shopping Center, Hicksville.

At the gatherings, club members display new illusions and share secrets of the trade. Club members also hold occasional magic shows and demonstrations in the Plant 1 and Plant 25 cafeterias. Club dues are $12 annually. For further information, contact Milton Lichaw at Ext. 56114.

Soccer highlights

The Grumman varsity soccer team punctuated its fall season of the September-to-May industrial league with 12 wins and two losses — good enough for a second-place finish.

The Tomcats had been tied for second place in the league with Polonez, an all-Polish team from Glen Cove, until a late November game last year. In that match, the Tomcats avenged an earlier loss to Polonez with a rousing 3-2 victory.

Tomcat center halfback Jeff Wilbert provided all the offensive punch necessary, scoring all three goals for the team. "It was a very emotional game for us," states Wilbert. "It pitted our American brand of soccer against their European style. After losing to them earlier in the season, we felt that we had something to prove," he added.

After securing sole possession of second place, the Tomcats went after first place Port Washington, but were forced to settle for a 1-1 tie. Nonetheless, Tomcat coach Joe Rietschlin noted that "the tie was a good indication of just how far the team has come since the start of the season, when we were beaten badly by Port Washington. We've got a young team that seems to be getting better as they play together more and more. They have great potential."

The Tomcats are sharpening their skills in an indoor-soccer league during the winter lay-off and will play in a number of regional tournaments before the season resumes on March 10th.

Varsity footballers. *The 1984-84 varsity soccer team finished the first half of the September-to-May season in second place with a 12-2 record. The Tomcat kickers are: (L to R, front) John Barci, Eugene Capobianco, Jeff Wilbert, Wally Scheu, Vito Fagiolino, Danny Puglia, Eddie Torres; (rear) Joe Rietschlin (coach), John Piaggione, Peter Cullen, Derrick Delahaye, Jessie Suapengco, and Keith Andree. Missing from photo: Alex Leibovich, Carl Lobo, and John Nasta.*

Women's varsity set

After an intense three round roll-off that included more than 40 women at the start, the Grumman women's varsity bowling team has been set. The roll-offs were completed at the end of January and the top bowler was Maureen Croes of Plant 5. Croes rolled an impressive 2,272 for the series to win the first spot on the varsity squad.

Teaming with Croes this year will be Marie Buttacavoli, from GHQ who rolled a 2094 series; Linda Wolff, GHQ, 2080 series; Patricia Hoehn, Plant 9, 2035; Linda Bookman, Plant 43, 2035; Alberta Bonner, Plant 1, 2000; Harriet Sjogren, Plant 43, 1990, Kathy Hasselbach, Plant 25, 1990; Bernadine Ellensohn, Plant 3, 1970; and Gloria Moore, Plant 30, 1914.

Bookman and Hoehn rolled an additional "tie-breaker" game for the fourth position on the four-person starting line-up. Hoehn won the tie-breaker with a 165 to Bookman's 157.

The women's varsity rolls into action on Saturday, February 23 at Mid Isle Lanes in Hicksville when the three top women will team with the Men's varsity squad's top three to bowl in the Pan Am Mixed Tournament.

The bowlers will also be in action on Sunday, March 3 in the Eastern Long Island Handicap Tournament at East Meadow Lanes; Saturday, March 30 in the Sperry Jamboree at Syosset Lanes; and consecutive Saturdays, April 6, 13 and 20 in the Long Island Industrial Tournament at Syosset Lanes.

Handball aces. *Slapping their way to the top were Calverton's 1984 Handball champions: (L to R) Eli Saldano, singles runner-up; Bernie Philossoph, singles and doubles champ; Sam Ferrantino, doubles champ, Jim Panos, doubles runner-up; and Tom Jenkins, doubles runner-up.*

Chess masters

Undefeated in its first five matches in the Long Island Industrial Chess League, the Grumman varsity chess team seems assured of a successful first season. The Grumman chess whizzes are playing for the first time as a team against such competition as Sperry, Hazeltine, Fairchild, AIL and other area companies.

Thus far, the Grumman team has come out on top consistently, with a match record of five wins and no losses and a team game-record of 14 wins, two draws and four losses.

The well balanced squad is led by three Grumman chess tournament champions: Jerry DeCarlo, a Plant 35 Research engineer who took the title in 1982; Keith Rodriguez, an ILS technical writer and varsity team captain who won in 1983; and Peter Cullen, a Plant 7 Flight Systems engineer who captured the title in 1984. Also contributing to the team's success this year are Ken Marley of Plant 2, Pete Holzer of Plant 25, and Ken Ford of Plant 279.

Team captain Rodriguez says his squad displays "tremendous competitive spirit." He hopes this spirit will foster enough interest to field a second chess team next year. So, for all those interested in becoming Grand Masters of the venerable board game, start practicing now, tryouts are tentatively scheduled for August.

Islander/Devils hockey

If the cold weather has you looking for something hot, then how about checking out the hockey action at the Brendan Byrne Arena on Thursday, March 7. At 7:30 that evening the New Jersey Devils will play host to their cross-town rivals, the New York Islanders.

Recreation is offering choice, center-ice seats and round-trip bus transportation to the Meadowlands for only $20. With 30 or more people in a group, you will have a private motorcoach at a departure location of your choice, i.e.: Bethpage, Calverton or Great River.

Tomcats skate past midshipmen

Jimmy the Greek wouldn't have made the Grumman varsity hockey team the favorite in its recent match against the U.S. Naval Academy's Midshipmen. After all, the Tomcats might have experience on their side, but the Midshipmen have youth on their side. Well, the ageless Tomcats proved experience pays off. They beat the youngsters at the Annapolis rink, 10-6.

At the outset, things looked rather bleak for the aging Tomcats. The Academy scored just one minute into the game. But the Grummanites didn't despair. At the 12-minute mark of the first period, center Jim Allen scored on a backhand shot from the right side.

Just two minutes later, defenseman Brian Burke blasted a slapshot past the Navy goaltender. Before the period ended, Mike "Lobo" LaBianco tickled the twine with a pinpoint shot — one of four that he would get that day.

The battle against the USNA varsity proved to be a very physical game — "the likes of which we had not seen since playing the New York City Fire and Police Departments," says Allen.

At the outset of the second period, team captain Dave Drew scored two quick goals. The Tomcats' aggressive play drew quite a few penalties, and they were forced to play two men short for much of the period. The midshipmen took advantage of the handicap and put in four goals. The score going into the final 20 minutes stood at 6-5 in Grumman's favor.

Plagued with aching muscles and bones, the Tomcats refused to give up. Six minutes into the period, LaBianca's slapshot increased Grumman's lead to two. Jim Allen iced the cake with a tip-in-play on an airborne pass from Brian Burke. With seconds remaining, center John Look launched a 165-foot shot that skipped into the empty net. The Grummanites had chalked up their first 1985 road victory.

"We'd like to thank all our fans who travelled to the Naval Academy as well as fellow Grummanites from the Washington Office who came to cheer us on," says Allen.

The next Tomcat game is set for February 20 in the Nassau Coliseum at 8:30 p.m. vs. Broncos.

A warm gesture. *Bob Pirrung (L), director of PC&B, presents Navy Academy varsity hockey coach Kent Douglas (C) and Cdr. Ray Mach with Grumman F-14 mementos before the Grumman-Navy hockey game at Annapolis.*

Navy vs. Tomcats. *Grumman varsity hockey players beat the boys from Annapolis, 10-6. The Tomcats have invited the Midshipmen varsity to visit Long Island next year.*

Spike champs. *Soaring high on their victory as the 1984 Plant 6 Volleyball champions are the 'No Names.' Calverton Operations Deputy Director Roy Montana presented the trophies to the team. The 'No Name' players are: (L to R) Steve Chandler; Stan Yakaboski; Rodger Lamm; Montana; Bobby Cooke; Nancy Lyman; Dave Thompson and Bill Shields. (Not shown — Andy Lunn.)*

Taller Tomcat team dominates B-ball league

The Grumman varsity basketball team continued its domination of the Long Island Industrial League with a lopsided 70-44 win over G.D.S.

Rookie Tomcat Paul Blinn combined with veterans Fred Turner, Ricky Cooke, and Columbus Poole to give a lesson on total team play. Blinn blocked five shots and pulled down eight rebounds while scoring 10 points. Turner dished out 11 assists and 14 points adding to Cooke's five rebounds and 10 points. Poole returned to his playing form of last season and contributed 10 points and eight rebounds.

Tomcat Del Harvey grabbed six rebounds, while Rick Picinich had four points, four rebounds and shot four-for-four from the foul line.

Weak foulshooting

Foulshooting, however, has been the one glaring weakness of this new Tomcat team and it was exposed most noticeably in a very close 65-64 win against the Swarm in the Glen Cove Open League. The varsity hoopsters could manage only 50 percent shooting from the foul line. They were lucky to hold onto the slim margin of victory when a last second Swarm shot caromed off the backboard.

The team was back to its top form in a game against Sperry, breaking the 100-point mark for the first time this year with a 101-71 victory. The Tomcats played an overall strong game, dominating the boards at both ends of the court with a total of 38 rebounds and eight blocked shots.

Shot blocking height is something new for the Tomcats and it has become a potent defensive weapon this year. In a recent game against the Sea Cliff Vikings, the team swatted away a total of 10 shots with Blinn accounting for eight blocks and Harvey two. The defensive intimidation helped hold the Vikings to 63 points, while the Tomcats totalled 78.

High hoopster. *Tomcat Rick Cooke's high flying offense helped power the Grumman varsity basketball team to a 101-71 victory in a recent game against Sperry. Cooke scored 14 points with four assists and three blocked shots in the game.*

'We can...We care.' Employee Contribution Committee (ECC) members braved brisk temperatures recently to raise a special 'C' flag that was awarded to Grumman by President Reagan's Citation Program for Private Sector Initiatives. The flag raisers are: Harry Volz, deputy director-Corporate Security and special advisor to ECC; Sharon Grosser, ECC administrator; ECC members - Linda Warren, Floyd Cisco, and Clare Mailley.

'Care Bear' flag flying high

Fluttering proudly in the breeze just below the American flag, the newest addition to the flagpole is affectionately refered to as the "Care Bear" flag. It was recently awarded to Grumman for outstanding contributions and initiative efforts in the private sector.

The Care Bear, or "C" flag was presented to Grumman by the President's Citation Program for Private Sector Initiatives. In a letter to Grumman Corporation President Joseph Gavin, United States President Ronald Reagan lauded the company as one of the first in the nation to receive the honor, saying that flying the symbol "tells one and all," 'We can. We care.'

Racquetball moves

The Grumman Racquetball League has changed the location of its league play. Formerly held at Unique Racquetball Club in Bethpage, the league has moved its operations to the Sportset Syosset Racquetball Club. Anyone interested in becoming a member of the league can contact Pam Goldman at 496-3100 for further information.

milestones

(Continued from page 12)

Mgt. (40)
Kenneth A. Haller, Maint. & Test (40)
Joseph N. Touchet, ATE Test & Repair (43)
Henry J. Browne, Prod. Cont. (43)
John T. Burns, Methods Eng. -GSE (43)
Barry J. Klecan, Resource (43)
Herman A. Haefele, Resource (43)
Leonard V. Galfano, Bus. Plann. (43)
Carl J. Camarda, Insp. Elect. (43)
Jerome C. Zajic, Mgt. & Staff (43)
William A. Sposato, Invent. Mgt. (44)
Charles E. Marchessault, ILS Training Sys. Eng. (47)
Francisco A. Mazzola, Fiberglass Layup & Bond (66)
Joseph L. Christina, Qual. (77)
William H. Stevens, CH53 E Assy. (77)
Daniel T. Tynan, Eng. (88)
George D. DiIorio, Struct. Des. (107)
Lawrence A. Buck, Prog. Mgt. EA-6B (110)
Angelina Uliano, Payroll (111)
Keith Wilkinson, ILS Digital Eng. (274)
Donald A. Reisch, Air Frame Sys. (279)

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Marion R. Hatred, Mfg. Prog. Mgt. (1)
Henry V. Vience, Maint. (1)
Mitchell W. Weyer, Cent. Stor. & Ret. (2)
Vincent S. Ortolano, Assy. (5)
Melvin N. Gough, Jr., Struct Test Staff (5)
Ethel Henrie, Financial Ops. Secty. (5)
Nicholas Maniscalco, EF-111 — Ditmco-Da. (6)
Ronald More, Matl. Ops. (6)
Emile J. Duchemin, Jr., Tech. Serv. (6)
Thomas F. Perrera, Trans. Ops. (7)
Joseph F. Callahan, Prog. Space & A/D (9)
W. B. Blauberg, Adv. Prog. (9)
Thomas J. Potter, Maint. (12)
Michael J. Calderaro, ILS Pub Proj. Mgt. (15)
Ronald W. Cereoli, Govt. Matl. Cont. (17)
Joan A. Nicholson, Reqts. Plann. (30)
Evelyn A. Gallagher, ILS Secty. Serv. (30)
John S. Micca, Cont. Cost. Anal. (30)
Charles W. Boppe, Aerodynamics Staff (35)
Mauro A. Miguel, Sys. Reliab. & Data Anal. (35)
Richard F. Chiafolo, Soft. Anal. (47)
William C. Amiot, Eng. (88)
Charles G. Quiter, Air Frame Sys. (294)
Frederick Raymes, Grumman International (GHQ)

Unit values

The following are the unit values for the Grumman Employee Investment Plan as of December 31, 1984. These unit values are compared to November 30th.

Equity Fund
2.523 up from 2.437

Fixed Income Fund
4.076 up from 4.032

Guaranteed Income Fund
1.939 up from 1.921

Company Stock Fund
$26.313 up from $25.563

GRUMMAN
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